National Security Commission on Artificial Intelligence
Public Minutes of Commission Meeting

Thursday, October 8, 2020 – 1:00pm – 3:30pm EST
Location: Video Teleconference

ATTENDANCE

Commissioners Present:

- Dr. Eric Schmidt, Chairman
- Hon. Robert Work, Vice-Chair
- Ms. Safra Catz
- Dr. Steve Chien
- Hon. Mignon Clyburn
- Mr. Chris Darby
- Dr. Ken Ford
- Dr. José-Marie Griffiths
- Dr. Eric Horvitz
- Mr. Gilman Louie
- Dr. Jason Matheny
- Hon. Katharina McFarland
- Dr. Andrew Moore

Commissioners Not Present:

- Mr. Andy Jassy
- Dr. William Mark

Staff Present:

- Yll Bajraktari, Executive Director
- Michael Gable, Chief of Staff, Committee Management Officer
- Angela Ponmakha, Designated Federal Officer
- Michael Lueptow, General Counsel
- Tara Rigler, Director, Strategy, Communications, and Engagement
- Commission Staff

AGENDA ITEM: CALL TO ORDER AND OPENING REMARKS

Ms. Ponmakha, as the Designated Federal Officer, called the meeting to order.

Mr. Bajraktari, Dr. Schmidt, and Hon. Work, gave brief opening remarks.

Dr. Horvitz provided an update related to the work of Line of Effort 6 - Ethics and Responsible AI, which he serves as the Chair.

Dr. Horvitz noted that in Quarter 3, Line of Effort (LOE) 6 concentrated their efforts on socializing the Quarter 2 Key Considerations to receive feedback from stakeholders, within departments and agencies critical to national security, as well as the public, that will ultimately inform the Final Report. He also discussed the LOE's cross-cutting work with the Commission's other LOEs, including work with LOE 2 to provide recommendations for the Intelligence Community (IC), as well as LOE 6's main Q3 recommendation which integrated NSCAI's Key Considerations into LOE 5's work by informing a blueprint for international cooperation.

AGENDA ITEM: LINE OF EFFORT 1 RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Dr. Moore gave a presentation of the first set of recommendations from Line of Effort 1. He explained that this quarter, LOE 1 recommendations address three priority areas: 1) Supporting the growth of nationwide artificial intelligence research and development (AI R&D) through novel funding mechanisms; 2) Posturing the defense and intelligence AI R&D communities to address national-security specific problems and capabilities through the establishment of a modern ecosystem for AI practice; and 3) Expanding the role of industry in the Department of Defense's (DoD) AI R&D to pursue next-generation capabilities. Dr. Moore presented the first two issues.

Stemming out of Issue 1, LOE 1 recommended the following five actions to strengthen federal support for the AI R&D environment alongside ongoing R&D funding and ensure the United States stays on the forefront of AI competition:

- Create an AI Innovator Award Program to Invest in Top Talent
- Invest in Research Teams Pursuing Transformative Ideas in AI
- Create AI Testbeds to Serve the Academic and Industry Research Communities
- Support AI Data Set Curation and Maintenance
- Launch an AI Research Challenge

Dr. Moore also discussed LOE 1's vision regarding the second issue, addressing the posture inside the national security agencies to take up advancements from the open environment to apply to national security-specific problems and build tailored solutions in collaboration with internal and external partners. He outlined LOE 1's belief that in order for U.S. national security

and defense to realize a future that incorporates AI-driven capabilities at scale and speed, it is essential to build a digital AI R&D ecosystem that serves the broader national security community, bringing together critically necessary infrastructure, resources, and services.

Commissioner Discussion:

Ms. Catz noted the importance of sharing, cooperation, and coordination starting at the research level early on. She also commented on the connections that this topic has to LOE 2, which she chairs.

Dr. Moore further emphasized the connection between LOEs 1 and 2.

Dr. Schmidt asked for further comment on the research challenge.

Dr. Moore noted that while there isn't a formal challenge recommendation, the notion is to test AI systems (or systems of systems), taking inspirations from things pioneered by the JAIC's humanitarian assistance and disaster response projects, which were designed to be both useful and inspiring.

Mr. Bajraktari asked the commissioners a question from Matt Sheehan regarding what types of problems or topics make good candidates for a grand challenge.

Dr. Moore responded that they are looking for problems whose solutions require systems to work together. He pointed to examples such as the moon landings or Manhattan Project, both of which required integration of many pieces of technology, not just one.

Dr. Schmidt noted that a number of challenges could achieve this goal. He suggested that the LOE 1 commissioners consider putting out categories in order to stimulate discussion around the ideas.

Dr. Horvitz also emphasized the idea of coming up with real-world oriented concrete challenges that require advancements on multiple frontiers of AI in order to help push innovation across the board.

Sensing a desire to hear specific examples, Dr. Moore discussed potential challenges around human medical-evacuation that would allow for evacuation or on-site treatment in dangerous situations where human rescuers are unavailable, as well as advancements in predictive forecasting in fire and flood situations to assist rescuers. He noted that although the timelines for these advancements are unclear, they demonstrate the potential to bring together natural language processing, human understanding, scene recognition, advanced optimization, and planning to formulate an entire system.

Dr. Horvitz emphasized the potential in the fire rescue sphere not just in predictive potential, but also in building action plans and identifying ideal interventions.

At the conclusion of the discussion, Hon. Work called for a voice vote on the block of five recommendations. The proposed first set of LOE 1 recommendations passed unanimously.

Presentation of Proposed Recommendations:

Dr. Chien gave a presentation of the second set of three recommendations related to Line of Effort 1's work on government-industry cooperation on AI R&D.

First, to facilitate DoD collaboration in AI, the LOE 1 Commissioners recommended that the DoD communicate modernization priorities to industry through issuance of technology R&D objectives specifically in the area of AI. Second, to facilitate application in the field of AI, the LOE 1 Commissioners recommended that the DoD review, modernize, and streamline its Small Business Innovation Research (SBIR) process to strengthen return on investment and encourage broader participation of American technology start-up and small business companies. Finally, LOE 1 recommended that the DoD launch an AI Catalyst Initiative to accelerate private-sector research into longer-term, next-generation AI-enabled defense capabilities.

Commissioner Discussion:

Mr. Bajraktari asked a question from NSCAI's YouTube comment section: "Why not use a 'dual-use' capital approach? Investing in AI entrepreneurs/startups around DC would create more [return on investment] and more AI jobs."

Dr. Chien commented that he believes those avenues exist.

Mr. Louie noted that some of the commissioners are very aligned with that comment. He advocated for creating initiatives such as SBIR to engage with entrepreneurs and small and midsize companies around the problems that we face. These are dual-use and can leverage both the commercial markets and the consumer markets and align that with the best quality of technologies and make those technologies available for national security reasons.

Dr. Moore commented that it is important to remember that there are some areas that need massive investments that only large companies or governments can go after including quantum computing and sensing. He stated that he does not expect these to come out of small venture capital (VC) funded ventures.

Hon. Work called for a joint vote to approve both Issue 2—Creating a Digital Ecosystem for National Security AI R&D—and Issue 3—Expanding Industry's Role in DoD's AI R&D to Develop Next-Generation Capabilities—Recommendations 6, 7, and 8.

The proposed Issue 2 and Issue 3—along with Issue 3 recommendations 6, 7, and 8—passed unanimously by voice vote.

After the conclusion of the public meeting and due to the joint vote on Issues 2 and 3, Dr. Andrew Moore and Dr. Eric Horvitz each requested their vote change from "in favor" to "abstain" on LOE 1, Issue 3, Recommendations 6, 7, and 8 for the purposes of the official record.

AGENDA ITEM: LINE OF EFFORT 2 RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Ms. Catz gave a presentation of the recommendations from Line of Effort 2.

Ms. Catz stated that in the Third Quarter, LOE 2 sought to build upon their previous work, aiming to deliver a complete leadership and policy ecosystem to improve both the DoD and IC's ability to apply AI to national security challenges.

Specifically, LOE 2's Third Quarter recommendations seek to:

1. Empower DoD and IC chief technology officers (CTOs) to effectively drive technology strategy, inform supporting requirements, concepts, prototyping, and experimentation; and develop common technical standards and policies;
2. Drive rapid adoption of emerging technologies through AI-enabled technology scouting, learning from everything going on around the world, both in industry and in government;
3. Provide a dedicated fund to accelerate transition of AI technologies into programs of record; and
4. Build a coordinated and federated approach to applying AI-enabled applications to open source intelligence in all intelligence domains.

Ms. Catz explained that LOE 2 has put forward 7 recommendations, including 3 DoD recommendations and 4 IC recommendations. The DoD recommendations were as follows:

- Recommendation 1: Under Secretary of Defense for Research and Engineering (USD(R&E)) should integrate DoD's technology scouting community of practice, leveraging AI-enabled analytics to provide authoritative technology inputs for national security planning.

- Recommendation 2: USD(R&E) should be appointed the Co-Chair and Chief Science Advisor to the Joint Requirements Oversight Council (JROC) for joint and cross-domain capabilities.
- Recommendation 3: USD(R&E) should have a dedicated fund to mature, operationally prototype, and transition exceptionally promising AI-enabled technologies.

Commissioner Discussion:

Dr. Schmidt commented that his experience with the military is that it is extremely hierarchical and that the resources follow the hierarchical tree. Unless we adopt this recommendation or something similar, we won't get enough resources and money for AI, because of competing priorities. Dr. Schmidt further emphasized his belief that AI is going to be the fundamental defense challenge over the next 10 years and that this reality should be stated very clearly.

Hon. Work called for a vote on LOE 2's DoD recommendations. All three recommendations passed unanimously.

Presentation of Proposed Recommendations:

Ms. Catz presented LOE 2's proposed recommendations for the Intelligence Community. The proposed recommendations were as follows:

- Recommendation 4: Within the Office of the Director of National Intelligence (ODNI), the Director of Science and Technology (S&T) should be designated as the IC's CTO and empowered to enable the IC to adopt AI-enabled applications to solve operational intelligence requirements.
- Recommendation 5: The IC CTO, in coordination with USD(R&E), should develop a technology annex to the National Intelligence Strategy that establishes technology roadmaps to adopt AI-enabled applications to solve operational intelligence requirements.
- Recommendation 6: The IC CTO should establish common technical standards and policies necessary to rapidly scale AI-enabled applications across the IC and have the authority to enforce them across the IC.
- Recommendation 7: The IC should develop a coordinated and federated approach to applying AI-enabled applications to open source intelligence.

Commissioner Discussion:

Dr. Horvitz commented on his hope that LOE 2 has been getting inter-agency feedback regarding the proposal of a CTO for the IC, especially relating to organizational and political friction.

Ms. Catz commented on the difficulty that exists given that components of the IC need to work together, but are not structured to do so. She noted that it is not always about the difficulty of the technology. Sometimes it is sociology that makes it hard to adopt a change in structure. Ms. Catz said that she expects a spectrum of difficulty when it comes to adopting structural changes.

Mr. Louie noted that in 2012, he was on a prior Commission on R&D for the IC where they empowered that role. He appreciated that this recommendation continues the process and moves the ball forward in incorporating AI into the IC's analytical functions. He noted that although change may be hard, the IC has demonstrated the ability to do so.

Mr. Bajraktari read a comment from Steve Welby: "These recommendations will only be effective if USD(R&E) is resourced and staffed with the talent required to support these roles."

Ms. Catz stated that the Commission agrees entirely with that sentiment.

At the conclusion of the discussion, Hon. Work called for a voice vote. Mr. Darby abstained from this set of recommendations. The remaining commissioners passed the four IC recommendations unanimously.

AGENDA ITEM: LINE OF EFFORT 3 RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Dr. Griffiths gave a presentation of the first set of proposed recommendations from Line of Effort 3 relating to the government's AI workforce. The workforce recommendations were broken into eight groups:

1. LOE 3 recommended that Congress support the Army AI Task Force's AI and Data Science Workforce Initiative, the Navy Community College, the Air Force Computer Language Initiative, and the Air Force/MIT AI Accelerator.
2. LOE 3 recommended the government improve its management of its digital workforce by accelerating its existing occupational series initiatives for software developers, software engineers, data scientists, and knowledge managers; and by fast tracking an initiative for an AI occupational series.
3. LOE 3 recommended Congress adopt the Science, Technology, Engineering, and Mathematics (STEM) Corps and AI Scholarship for Service proposals currently before it, that government agencies create digital talent recruiting offices empowered to actively recruit technologists, and that non-DOD agencies create public-private talent exchange programs.
4. LOE 3 recommended the military services create primary career fields that allow

military personnel to focus on software development, data science, or artificial intelligence for their entire career, either as managers or technical specialists as well as certifications in AI mission engineering, data engineering, safety and responsible AI engineering, and for AI hardware technicians.

5. LOE 3 recommended the military services integrate topics such as problem definition and curation, a conceptual understanding of the AI lifecycle, data collection and management, understanding probabilistic reasoning and data visualization, and data-informed decision-making into training for junior officers and senior non-commissioned officers.
6. LOE 3 recommended courses of action to address educating organizational leaders with sufficient emerging technology literacy to guide the careers of their subordinates, integrate AI into operational concepts, and make resourcing decisions.
7. LOE 3 recommended that policy experts, who do not lead organizations, but inform organizational and national policies, attend short courses provided by either their agency or a contracted group to expose leaders to AI, its capabilities, and policy relevant topics.
8. Lastly, LOE 3 recommended changes to the acquisition workforce, particularly related to Defense Acquisition University.

Commissioner Discussion:

Dr. Chien emphasized the importance of improving the United States' technological literacy, particularly for AI. As applications pervade all enterprises of the DoD and the IC, it is a very important topic.

Hon. Work noted that throughout Quarters 1, 2, and 3, LOE 3 has by far the most recommendations because the Commission is unified on thinking that talent is the key to winning this competition.

Hon. McFarland commented that it is important to consider the broader workforce available, including those who aren't able to attend college but if given access to training, have the potential to be productive workforce members.

Hon. Clyburn further emphasized the importance of trained, committed, focused individuals who are allowed and enabled to help their country. She noted that there are many recommendations, but that all are necessary and intentional. She reaffirmed that education and training do not end at any point in the career or educational track.

Mr. Bajraktari highlighted a question from Tricia Martinez: "What specifically is being done or will be done around AI workforce training? How will we drive more skilled talent to the public

sector?" He noted that the Commission's emphasis on workforce recommendations over the past three quarters show their commitment to building the public sector's AI workforce.

At the conclusion of the discussion, Hon. Work called for a voice vote on the first set of 21 recommendations. The recommendations passed unanimously.

Presentation of Proposed Recs:

Dr. Griffiths gave a presentation of the second set of proposed recommendations from Line of Effort 3 relating to STEM education. Dr. Griffiths commented that the current model of STEM education in America will not meet the challenges of tomorrow. Although encouraged by the recent initiatives and legislation to provide more equitable access to broadband internet, the devices and services needed to take advantage of it, and investments in low-performing school districts, the LOE 3 commissioners feel that more needs to be done.

In order to boost American innovation in AI, LOE 3 proposed recommendations addressing K-12 education, undergraduate and postgraduate education, reskilling/upskilling of workers once they are in the workforce, taking specific action aimed at improving the microelectronics workforce.

Dr. Griffiths also noted that while the Commission's mandate focuses on AI, not STEM education writ large, there is no way to improve the level of AI literacy in the United States without these broader initiatives.

Commissioner Discussion:

Dr. Chien posed a question to the LOE 3 commissioners regarding the choice to include STEM education in their recommendations, given that the topic is less directly linked to AI and national security as a topic.

Dr. Griffiths responded that the LOE felt that improvements are necessary in STEM education all the way through the spectrum because this pipeline will eventually be siphoned off to support various STEM areas. She noted that the United States is falling behind on STEM education internationally and that these recommendations are necessary to both increase the number of students that go on to study STEM in a higher learning institution and provide the STEM background that is needed to allow for specialization as students move forward in their careers.

Dr. Ford also expressed concern over the K-12 education recommendations. He commented that it is hard to imagine a productive K-12 AI curriculum, and that the best option at that level is to teach math to put students in a better position. Dr. Ford suggested that the K-12 recommendations don't seem to be as good a fit as the rest of the education recommendations, and that it may be worth studying this topic more before passing the recommendations.

Dr. Griffiths agreed about the importance of teaching math. She further identified the problem stemming from a lack of qualified teachers in the K-12 system. She argued that the teachers themselves aren't confident enough in their abilities, so to address this at the root, more teachers are needed for required foundational topics.

Dr. Ford suggested that the section be tweaked to include incentives for those with mathematics degrees to go into teaching.

Dr. Chien questioned whether STEM and K-12 education is within the AI-centric mandate of NSCAI.

Hon. Clyburn commented that not all districts and systems are created equal. In some instances from a teaching standpoint, there will necessarily be some improvisation until the United States gets to perfection in terms of the number of teachers in these disciplines with the desired skills. She noted that in the meantime, there are ways to integrate and tweak the curriculum in order to spark and challenge those students.

Mr. Louie commented that he is supportive of the language and that it isn't just the mathematical backgrounds that build the skills for AI. He noted that AI is going to move rapidly and that it is important to make sure that K-12 students understand the impact of AI and how to use AI in STEM-related fields. He commented that integrating AI into K-12 programs allows students to experience AI without waiting until they get to college. Mr. Louie further highlighted that the United States' competitors are also integrating AI into their programs. Thus, from a competitive analysis, even though the recommendations may not be perfect, they build an important framework.

Dr. Chien agreed that AI familiarity and comfort with AI is what the Commission is trying to educate.

Dr. Moore commented that successful IT careers have the combination of mathematical, team problem-solving, and resilience skills. Regardless of the field, you have to be using technology in your education. He further stated that it should not be this Commission that decides the curriculum. It is necessary to listen to K-12 educators.

Mr. Bajraktari read a question provided to the Commission by Tricia Martinez: "What is the timeline for executing on these workforce recommendations?"

Hon. Work explained that the Commission provides recommendations to the Executive Branch and Legislative Branch. Ultimately it is up to them to decide at what pace and what resources the

United States devotes to them. Thus the Commission can't give a definitive timeline, but Hon. Work stated that the Commission does have a sense of urgency.

Dr. Griffiths also emphasized that this is an urgent and critical need. She stated that the United States must pay attention to the K-12 system or risk failing later on down the road.

Ms. Catz asked for clarification regarding if the loan forgiveness plans were for math and science, or just math.

Dr. Griffiths answered that the Commission's recommendation is more generic. While there are some loan forgiveness programs that are focus on more specific areas of expertise like math and science, LOE 3's recommendation is focused on reducing the time period for these programs.

Hon. Work noted that when presenting LOE 3's proposed recommendations, Dr. Griffiths omitted a recommendation supporting the Air Force Digital University. He asked to clarify for the record if that was an intentional or inadvertent omission.

Dr. Griffiths confirmed that it was an unintentional oversight.

At the conclusion of the discussion, Hon. Work called for a voice vote. The Commissioners decided to table recommendations 1-5 relating to K-12 education so that the issue can be further studied for the final report. Recommendations 6-12 passed unanimously.

AGENDA ITEM: LINE OF EFFORT 4 RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Mr. Louie gave a presentation of the recommendations from Line of Effort 4.

He commented that in Quarter 3, LOE 4 focused on how biotechnology, quantum computing, and microelectronics combine with AI to create new national security risks and opportunities, and provided recommendations to strengthen U.S. leadership in each. Additionally, LOE 4 put forth recommendations on improving supply chain resilience and reorganizing the Executive Office of the President for long-term strategic competition governed by technology. The recommendations were as follows:

I. Biotechnology

This category contains four recommendations, which would:

- 1) Promote U.S. leadership in key elements of biotechnology which will benefit from AI;
- 2) Update the National Biodefense Strategy to address AI-enabled biothreats;

- 3) Highlight ethically problematic uses of AI and biotechnology by BGI and the Chinese government; and
- 4) Pursue global cooperation on smart disease surveillance monitoring.

II. Quantum Computing

This category contains three recommendations which would:

- 1) Publicly announce government interest in specific quantum use cases;
- 2) Make quantum computing accessible to researchers via the National AI Research Resource; and
- 3) Foster a vibrant domestic quantum fabrication ecosystem.

III. Microelectronics Leadership & Critical Technology Supply Chain Resilience

These recommendations focus on incentivizing domestic microelectronics fabrication and improving supply chain resilience more broadly by:

- 1) Authorizing and fully funding the CHIPS for America Act provisions in the NDAA;
- 2) Endorsing a refundable investment tax credit for semiconductor manufacturing equipment; and
- 3) Improving the analysis of supply chains for emerging technologies and the U.S. approach to reshoring key aspects of the production of emerging technologies.

IV. A Technology Competitiveness Council

LOE 4's fourth category of recommendations focuses on empowering an entity within the White House to develop a comprehensive technology strategy and ensure continued leadership across the scientific, economic, and security aspects of each technology. The Commission offers a range of organizational models which could perform this function, and describes the tradeoffs of each. It recommends creating a new Technology Competitiveness Council chaired by the Vice President with an Assistant to the President serving as the day-to-day coordinator.

Commissioner Discussion:

Dr. Schmidt commented that the White House is already focused on elements of this. He commended the great work of the White House in promoting leadership in Quantum Information Sciences.

Mr. Louie agreed that the White House has shown a lot of support and leadership on this issue.

Dr. Schmidt asked how LOE 4 is approaching the issue of semiconductor leadership. He stated that the Commission has indicated some aspects of hardware technology should not be exported. However, semiconductors are a core component of American leadership and the United States is currently critically dependent on foreign sources, such as Taiwan.

Mr. Louie responded that the current goal is reshoring key elements of the supply chain. He highlighted that the Commission recommended tax credits for investing in semiconductor equipment as a way of incentivizing U.S. firms and allies to establish manufacturing facilities in the United States. Mr. Louie remarked that if the United States wants to have a vibrant domestic capability, it will need to incentivize a significant amount of capital investment.

Mr. Darby also responded to Dr. Schmidt by outlining three issues: 1) reshoring merchant fabrication capacity so companies can manufacture chips domestically rather than offshore; 2) investing in packaging as a differentiating element to the United States' microelectronics strategy, including new architectures associated with packaging; and 3) investing in research associated with materials, including new tool sets needed to enable differentiated microelectronics over the long term.

At the conclusion of the discussion, Hon. Work called for a voice vote. All proposed LOE 4 recommendations passed unanimously.

AGENDA ITEM: LINE OF EFFORT 5 RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Dr. Matheny gave a presentation of the recommendations from Line of Effort 5. LOE 5 presented 11 recommendations as part of an operational framework for global AI cooperation. The framework has three pillars, each of which require clear, sustained U.S. leadership to establish and maintain.

- First, deepening global AI coordination for defense and security
- Second, shaping AI cooperation through multilateral forums
- Third, building resilient bilateral AI cooperation with key allies and partners

To **deepen global AI cooperation focused on defense and security**, LOE 5 proposes two recommendations.

- LOE 5 provides concrete guidance to the Departments of State and Defense to enhance and accelerate the responsible development, adoption, and deployment of AI systems across the range of military and security applications within North Atlantic Treaty Organization (NATO)—including the Alliance itself and NATO allies.

- LOE 5 recommends that the US government pursue formal AI cooperation agreements in the Indo-Pacific region.

To **shape AI cooperation through international organizations and cross-border, multi-stakeholder forums**, LOE 5 offers an assessment of the many current efforts and recommend the US engage proactively with promising work of the Organisation for Economic Cooperation and Development (OECD), the Global Partnership for Artificial Intelligence, the emerging D10

coalition—which includes the Group of Seven (G7) nations plus Australia, India, and South Korea—and other discrete efforts.

- LOE 5 recommends that the United States pursue a "coalition-of-coalitions" or mosaic approach to the efforts, designed to prioritize projects that would further the interests of the US and other free and open nations around AI use and development based on an assessment of their progress, potential, and membership structure.
- LOE 5 recommends that the United States look beyond the current landscape towards the potential formation of a broader Digital Coalition of free and open states to coordinate strategy, promote high standards for digital infrastructure, and serve as a launching point for collaborative work.
- LOE 5 proposes a series of four recommendations focused on international technical standards.
    1. The President should issue an Executive Order that would create an interagency coordination task force—including the Departments of State, Defense, Commerce, and Homeland Security, the Intelligence Community, and National Institute of Standards and Technology—charged with sharing threat information and identifying US national security interests related to standards; direct the task force to improve collaboration and partnership with US industry; direct agencies to resources and support improved participation by the US government in international standards-setting activities; and foster the creation of a private-sector standardization center to improve sharing of best practices and facilitate coordination on focused research and evaluation.
    2. Congress should appropriate funds for a US government team of at least ten persons to support the US AI Standards Coordinator.
    3. Congress should create a grant program to enable small- and medium-sized businesses to participate in international standardization efforts.
    4. The US government should promote AI standards in areas that further US and allies' national security and defense interest in the appropriate and responsible use of AI.

To **build resilient bilateral AI cooperation with key allies and partners to prevail against the challenges posed by our great power competitors**, LOE 5 proposes three recommendations.

- The development of a U.S.-India Strategic Tech-Alliance.
- A Strategic Dialogue for Emerging Technologies with the European Union.
- A Blueprint for AI Cooperation to guide US government efforts to build robust high-level and working group relationships with key allies and partners around AI.

Commissioner Discussion:

Dr. Schmidt stated that there is a term floating around, around the concept of a Digital 10 or Digital 12—a union of countries that would include the US, Japan, and a few others. He inquired if this is the same as what LOE 5 is proposing.

Dr. Matheny responded that what LOE 5 is proposing is slightly different. LOE 5 is instead proposing a framework that draws on existing alliances. He noted that depending on the technology issue, there could potentially be a different composition of countries that are relevant to a tech alliance, but this specific recommendation is about creating a strategy to coordinate alliances in ways that advantage democracies.

Hon. Work commented that these recommendations can be tracked back to the Commission's Interim Report, where NSCAI mentioned that AI competition has an embedded values competition. He stated that the ways countries adopt technologies reflect their values. Authoritarian regimes have already shown their proclivity to use AI to surveil their population, hold down minorities, and do other malign activities. Hon. Work emphasized the importance of winning the AI competition so that AI norms and standards reflect American values such as individual privacy and unbiased AI.

Dr. Horvitz noted that getting on the same page with traditional allies and countries that share our values is going to be critical, starting with high level principles, getting into key areas of concern and opportunity, and, even more importantly, going down to the details of engineering implications. This includes key uses of AI, privacy, inclusiveness, biases, role of people, sharing experiences with AI systems, testing & validation, documentation, and so on. He noted that he is excited to think about how we work with partners around the world.

Mr. Bajraktari read a question from Ryan Sullivan to the Commissioners: "If we focus on democratic partnerships and allies, due we inherently exclude China—thus forcing other allies to choose sides? Leaving no room for cooperation or rivalry partnerships?"

Dr. Horvitz responded by stating his hope that these key ideas, including reliability and safety, will be areas for dialogue by all nations, even potential adversaries.

Dr. Matheny also noted that in the Commission's final report, they recommended looking at where the United States can collaborate on safety with competitors, ensuring that the competition is safe and not a "race to the bottom."

Mr. Louie responded that this will be covered in the final report, but there are opportunities to cooperate with competitors on many fronts. Not all competition is bad, sometimes it's good to

promote each other's willingness to race in a positive way. Mr. Louie also highlighted that there are other issues, not just safety issues, that the United States can frame cooperation around.

Dr. Chien noted that the question of how the United States can better model the performance of AI systems is a central area of future research, and a common topic of discussion for LOEs 1 and 2.

Dr. Horvitz also pointed out that this has come up in discussions around systems of systems. It is important to understand how our own components for modeled AI agents interact, something that can get even more complicated with agent coordination across competitive lines.

Hon. McFarland noted that people must recognize that the global supply chain exists in this domain as well and that we don't know the full history of what systems are in front of us. She commented that the United States has an obligation to understand systems enough to have a reliability, truth, and confidence perspective. Having global relationships leveraging our AI has to have that interdependency brought in.

Mr. Bajraktari read a question posed by Geoff Odlum: "Did the Commissioners have the opportunity to brief Defense and State Department leaderships regarding these draft recommendations? If so, what was the reaction?"

Mr. Bajraktari noted that the Commission has worked with both State and DoD staff on these recommendations and that the Commission enjoys collaborative relationships with both of agencies.

Dr. Matheny also added that the Commission looks forward to briefing these recommendations now that they have been made public.

Dr. Horvitz also highlighted the constructive guidance on the Key Considerations received during an interagency feedback listening session held by the LOE 6 staff.

At the conclusion of the discussion, Hon. Work called for a voice vote. All proposed LOE 5 recommendations passed unanimously.

AGENDA ITEM: SPECIAL TOPIC ON MALIGN INFORMATION RECOMMENDATIONS REVIEW AND DELIBERATION

Presentation of Proposed Recommendations:

Mr. Darby briefly introduced the Special Topic for Malign Information.

An NSCAI staff member gave a presentation of the recommendations from the Special Topic for Malign Information. The recommendations were as follows:

Issue 1: A World Defined by Malign Information

- The President should issue a new national strategy for the global information domain that more fulsomely addresses how rival malign information is taking on new dimensions in the AI era.

Issue 2: Organizing to Defend, Counter, and Compete against Malign Information Operations

- The Intelligence Reform and Malign Information Act must: 1) Create an interagency Malign Information Operations Center (MIOC) modeled after the National Counter Terrorism Center; 2) Expand the mission, scope, and authorities of the Election Threat Executive to oversee efforts by the United States Government to identify, attribute, defend against, and counter state and nonstate sponsored-malign information operations; and 3) Designate the Under Secretary of Public Diplomacy and Public Affairs at the Department of State as critical to fight against malign information operations.

Issue 3: Adopting an Offensive Approach to Counter and Compete against Malign Information Operations

- The Department of State should build a Global Coalition to Counter and Compete Against Malign Information tasked with directing, leading, synchronizing, integrating, and coordinating efforts by allies to recognize, understand, expose, and counter foreign state and nonstate propaganda and malign information efforts aimed at undermining or influencing the policies, security, or stability of the United States, its allies, and partner nations.
- Direct the Department of State to deploy dedicated Malign Information Watchers to key U.S. Embassies and Consulates. U.S. Embassies and Consulates are the United States Government's sensor network for global situational development and awareness.
- Create a Malign Information Detection and Analysis Center (MIDAC) controlled by the United States Government and staffed by an elite team of intelligence analysts.
- Direct the Office of Science and Technology Policy (OSTP) or senior- level Technology Advisor at the White House to coordinate a United States Government- wide Grand Challenge for autonomously detecting, attributing, and disrupting malign information operations.
- Executive Branch departments and agencies should utilize Small Business Innovation Research (SBIR) contracts and Other Transaction Authorities (OTAs) to deploy capital to companies that offer technical solutions that will assist the United States Government in identifying, countering, and defending against malign information operations.

- Give the Federal Communications Commission (FCC) the authority to set best practices for fighting malign information from foreign actors. Congress should direct the FCC to work with the private sector, civil society, and other experts when developing the best practices. Congress should require the FCC to 1) conduct a review of malign information from foreign actors on information and communication technology (ICT) platforms and potential industry-wide best practices to combat malign information, and 2) incorporate the views of the private sector into its best practices guidelines. After completion of its review and development of best practices, Congress should consider these best practices and authorize the FCC to take enforcement actions against commercial ICT platforms that fail to adopt/implement the best practices after a certain period of time.
- Pass the bipartisan Honest Ads Act, which would hold digital advertisements to the same Federal Election Commission and FCC disclosure requirements as television, radio, and print advertisements.

Commissioner Discussion:

Dr. Schmidt expressed his support for the recommendations, as well as his concern that it probably still wouldn't be enough. He stated that with the broad ability of deepfakes, the situation is going to get worse and the United States should rethink how to deal with this threat.

Dr. Horvitz also emphasized that this is only the tip of the iceberg of one of the key issues of our time. He agreed with Dr. Schmidt's comment that this is not enough.

Mr. Darby commented that the Commission will continue to look at this issue going into the final report.

Dr. Schmidt commented that the country needs a bolder plan that goes beyond just monitoring.

Dr. Horvitz added that detection is probably going to fail and therefore, promoting the new standards on media production and authentication is critical.

Dr. Chien commented that it's difficult to predict the types of attacks that will occur and that in 5 years he believes there will have been quite a few types of attacks that we never would have imagined.

Mr. Louie stated that there is always going to be an arms race and things are no different in cyber. He commented that the Commission needs to take a step back. He liked that MIOC focuses more on actors and intent, not just on the technology. He stated that they must be put together, because these are the same tools that will be useful for summarizing news articles and

other things democracies and commercial companies use all the time. However, in the hands of wrong actors or wrong intent, is where the problems lie.

Dr. Moore commented that while this issue is important, he doesn't see it as highly related to AI and the Commission's mandate. Therefore he questioned whether the Commission should be acting.

An NSCAI staff member offered brief examples of the types of concerns found across national security enterprises.

Dr. Ford primarily agreed with Dr. Moore's comments. He was particularly concerned with Recommendation 9, and stated his desire for staff to continue to analyze it.

Mr. Darby agreed to table Recommendation 9.

Dr. Horvitz responded to Dr. Moore, stating that there is enough dark matter to be understood that is relevant to the AI pursuit when it comes to what is even possible per malicious uses that warrants study, potential monitoring, potential tracing back to actors and intentions. He stated his view that this issue is within the scope of the Commission. He was not opposed to tabling the issue, but he noted that it will be important to return to the issue with vigor.

Dr. Chien, echoing Dr. Moore, identified that this issue can be viewed as 2 separate splinters. First, he stated that the technical aspects of how you study and leverage the use of AI both on offensive and defensive is clearly within the charter of NSCAI. However, there is also a separate topic which is more of a policy decision of what would be the use of said technology and regulation surrounding it, which is subject to more controversy and is potentially outside the NSCAI's mandate.

Dr. Moore agreed with the two-part framework.

Mr. Darby commented that they are the National Security Commission on AI, so it is well within the Commission's mandate to think about actors and approaches that may leverage this technology against the United States' national interests. He noted that the Commission will continue the discussion and broaden the conversation.

Dr. Chien added that AI has to be involved because you will need to rapidly develop and respond to problems, and won't necessarily be able to have a human in-the-loop.

Hon. McFarland added that the description of malign AI has to have characteristics that have not yet been sufficiently flushed out. She suggested that be done in the next quarter so that the issue can be narrowed down into the appropriate focus.

At the conclusion of the discussion, Hon. Work proposed moving this block out of the Third Quarter in order to make some more pointed recommendations and consider further the scope of the Commission's mandate as it prepares its Final Report. This motion passed unanimously.

Following the vote, Hon. Work noted that the Commission will not have a Fourth Quarter report, the Final Report will sharpen arguments and consolidate Commissioners' recommendations.

AGENDA ITEM: PUBLIC COMMENT

Mr. Bajraktari read aloud some written comments from the public that the Commission received prior to and during the meeting. He also posed questions from the public to the Commissioners for answers. All received comments are included in the appendix of these minutes.

AGENDA ITEM: CLOSING REMARKS

Dr. Schmidt and Hon. Work gave closing remarks.

ADJOURNMENT:

The meeting was adjourned at 3:27PM EST by Ms. Ponmakha, the Designated Federal Officer.

Meeting minutes prepared by: Commission Staff

Approved and signed by the Commission's Designated Federal Officer: November 9, 2020

Ms. Angela Ponmakha
Designated Federal Officer

Approved and signed by the Commission's Chair and Vice Chair: November 9, 2020

Dr. Eric Schmidt
Chair

Hon. Robert Work
Vice Chair

Appendix: Public Comments and Questions Received for the October 08, 2020 Meeting:

Comments/Questions received through event registration or email:

Question from Jonathan Rodriguez Cefalu - Could you please directly address the question of how the US will crack down on reckless scientists who might make an AI that escapes the lab and starts a war?

Comments/Questions received during the meeting via YouTube/Twitter:

YouTube

Question for LOE 1 from Matt Sheehan - Curious to hear suggestions from Mr. Moore or others on what problems/topics would be good candidates for an AI research grand challenge.

Question for LOE 1 from Jim Liew - Also, why not use a "dual-use" capital approach? Investing in AI entrepreneurs / startups around DC, create more ROI and more AI jobs!

Question for LOE 1 from Tina Huang - Interested in learning more about creating AI testbeds if there's time to elaborate.

Question for LOE 1 from Jim Liew - Hi, could you speak a bit more about what are the "AI testbeds," is this a city in the US? or place in an agency?

Comment for LOE 2 from Stephen Welby - These recommendations will only be effective if USD(R&E) USD is resourced and staffed with the talent required to support these roles

Question for LOE 3 from Tricia Martinez - Thanks for opening the conversation! What specifically is being done or will be done around AI workforce training? How will we drive more skilled talent to the public sector?

Question for LOE3 from Tricia Martinez - What is the timeline for executing on these workforce recommendations?

Question for LOE 3 from Adam Rivers - Could DoD civilian recruiting be done across federal departments? USDA and other departments face similar issues. This could make it easier to bridge institutional cultures and move talent into DoD.

Question for LOE 3 from Matt Sheehan - Could the commissioners speak more on what either a National Defense Education Act or Mid-Career Faculty Fellowships might look like?

Comment for LOE 3 from Matt Sheehan - On K-12 debate: US AI leadership needs more than AI researchers/engineers, but also AI-literate policymakers & citizens. These are people who would benefit from K12 curriculum that teaches AI concepts

Comment for LOE 3 from Tricia Martinez- There is a need to define what "AI skilled" means for engineers, data scientists, and business leaders. It's difficult to design training when we don't have a definition of what skilled AI talent is

Question for LOE 3 from Jim Liew - Why not team up with all the engineers in India? Wouldn't that neutralize the other +1 billion populated country?

Question for LOE 5 from Geoff Odlum - Excellent LOE5 recommendations. Did the Commissioners have the opportunity to brief Defense and State Department leaderships regarding these draft recommendations? If so, what was the reaction?

Question for LOE 5 from Ryan Sullivan - If we focus on democratic partnerships/allies, due we inherently exclude China - thus forcing other allies to choose sides? Leaving no room for cooperation or rivalry partnerships?

Question for LOE 6 from Peter Brown (Senior Advisor at the European Parliament Liaison Office) - Will the Commission also examine the corresponding ethical, legislative, liability, etc. issues regarding the "boundary" between human decision-making/agency and an AI system's authority to act? More particularly who establishes that boundary in which context? This is a high-level governance issue affecting all categories of staff and management in any organization. We are looking at this in an ISO standard on the subject but the Standard itself can obviously only go so far, so I'd be interested to hear what the Commission thoughts are on this issue.

Comment from Peter Brown - Spot on Eric! At the end of the day, humans remain accountable whereas AI does not and cannot. And, yes, an ISO Standard barely scratches the surface!

Question on Special Topic on Malign Info from Peter Brown - Can you get inspiration from cybersecurity threat information sharing models?

Comment on Special Topic on Malign Information from an anonymous listener via YouTube - Tab-6 is a great body of work and the United States Agency for Global Media (USAGM) needs to be included. This body should have a discussion with the newly assigned CEO Mr. Pack.

Twitter

Comment/Question from John Davisson - Question for Mr. Schmidt/the Commission: In 1973, the HEW Advisory Committee on Automated Personal Data Systems set out the Code of Fair Information Practice and called on Congress to enact it into law. The FIPs have been enormously influential, forming the core of the 1974 Privacy Act and numerous other federal statutes, state laws, and international instruments. By contrast, the NSCAI—in many ways a latter-day HEW committee—is still refusing to advise Congress enact baseline AI principles, despite the extensive policy work already done to identify and establish these principles. Why, among its many legislative recommendations and 65 pages of draft statutory language, does the NSCAI refuse to recommend AI principles for Congressional enactment? How can you recommend rapid escalation of AI use without establishing corresponding, universal safeguards?